

## **AMENDMENTS TO THE CLAIMS**

Claims 1-5 Cancelled

6. (New) In an impulse radio, a method of rake receiving, comprising:  
receiving a plurality of impulse radio signal reflections at a corresponding plurality of rake teeth;  
sampling said plurality of impulse radio signal reflections; and  
determining at least one figure of merit for one or more of said plurality of impulse radio signal reflections, wherein each of said at least one figure of merit being determined solely from samples of the corresponding one of said plurality of impulse radio reflections.
7. (New) The method of claim 6, further comprising:  
performing a data demodulation computation based upon the samples and the at least one figure of merit.
8. (New) The method of claim 7, wherein the samples corresponding to at least one of said plurality of impulse radio signal reflections are excluded during the data demodulation computation.
9. (New) The method of claim 8, wherein the samples corresponding to at least one of said plurality of impulse radio signal reflections are excluded based on at least one of said at least one figure of merit.
10. (New) The method of claim 7, wherein at least one of the at least one figure of merit is updated.
11. (New) The method of claim 10, wherein the data demodulation computation is based upon an updated one of the at least one figure of merit.
12. (New) The method of claim 6, wherein a time offset of at least one rake tooth of said plurality of rake teeth is confined to a corresponding placement zone.
13. (New) The method of claim 12, wherein the placement zone corresponding to said at least one rake tooth is adjusted based upon said at least one figure of merit corresponding to said at least one rake tooth.
14. (New) The method of claim 6, wherein at least one time offset is placed to maximize the energy captured by said at least one rake tooth.
15. (New) The method of claim 14, wherein the at least one time offset is determined solely based on samples of said plurality of impulse radio signal reflections at a corresponding one of said at least one rake tooth.

16. (New) The method of claim 14, wherein time offsets for two or more of said plurality of rake teeth are determined in parallel.
17. (New) The method of claim 6, wherein the at least one figure of merit is determined based upon the variance of the samples of said plurality of impulse radio signal reflections at a corresponding one of said plurality of rake teeth.
18. (New) The method of claim 6, wherein the at least one figure of merit comprises an approximation of the variance of the samples of said plurality of impulse radio signal reflections at a corresponding one of said plurality of rake teeth.
19. (New) An impulse radio receiver, comprising:  
sampling circuitry that samples plurality of impulse radio signal reflections at a plurality of rake teeth; and  
figure of merit determination circuitry that determines at least one figure of merit for one or more of said plurality of impulse radio signal reflections based solely on the samples of the corresponding one of said plurality of impulse radio signal reflections.
20. (New) The impulse radio receiver of claim 19, further comprising:  
demodulation computation circuitry that demodulated data based upon the samples and the at least one figure of merit.
21. (New) The impulse radio receiver of claim 20, wherein the samples corresponding to at least one of said plurality of impulse radio signal reflections are excluded during data demodulation.
22. (New) The impulse radio receiver of claim 21, wherein the samples corresponding to at least one of said plurality of impulse radio signal reflections are excluded based on at least one of said at least one figure of merit.
23. (New) The impulse radio receiver of claim 21, wherein at least one of the at least one figure of merit is updated.
24. (New) The impulse radio receiver of claim 23, wherein the data demodulation is based upon an updated one of the at least one figure of merit.
25. (New) The impulse radio receiver of claim 19, wherein a time offset of at least one rake tooth of said plurality of rake teeth is confined to a corresponding placement zone.
26. (New) The impulse radio receiver of claim 25, wherein the placement zone corresponding to said at least one rake tooth is adjusted based upon said at least one figure of merit corresponding to said at least one rake tooth.
27. (New) The impulse radio receiver of claim 19, wherein at least one time offset is placed to maximize the energy captured by said at least one rake tooth.

28. (New) The impulse radio receiver of claim 27, wherein the at least one time offset is determined solely based on samples of said plurality of impulse radio signal reflections at a corresponding one of said at least one rake tooth.
29. (New) The impulse radio receiver of claim 27, wherein time offsets for two or more of said plurality of rake teeth are determined in parallel.
30. (New) The impulse radio receiver of claim 19, wherein the at least one figure of merit is determined based upon the variance of the samples of said plurality of impulse radio signal reflections at a corresponding one of said plurality of rake teeth.
31. (New) The impulse radio receiver of claim 19, wherein the at least one figure of merit comprises an approximation of the variance of the samples of said plurality of impulse radio signal reflections at a corresponding one of said plurality of rake teeth.
32. (New) A method of rake receiving in an impulse radio, comprising  
receiving a plurality of impulse radio signal reflections at a plurality of rake teeth;  
sampling said plurality of impulse radio signal reflections;  
determining a plurality of figures of merit corresponding to the plurality of rake teeth,  
each one of said plurality of figures of merit being determined solely from samples of the  
corresponding one of said plurality of impulse radio signal reflections;  
determining a best figure of merit of said plurality of figures of merit; and  
determining whether to exclude at least one of said plurality of rake teeth from a  
demodulation computation based upon a comparison of its corresponding one of said plurality of  
figures of merit to the best figure of merit.
33. (New) The method of claim 32, further comprising:  
performing a demodulation computation based upon samples of those of said plurality of  
rake teeth that are not excluded.